Riverview Energy Corporation
Permit 147-39554-00065
ATSD Suggested Revisions - Technical and Organization Comments
April 17, 2019

Suggestions for Responses to (b)(6) Comments

1.) Response to (b)(6) Comment 2, letter (j), removes the amine absorber system, amine regeneration unit, sour water stripping system, and associated bypass lines as affected sources under 40 CFR 63 Subpart UUU.

   a. In the response, the regulatory citation should refer to 40 CFR 63.1562(b)(3) as opposed to 40 CFR 63.1562(a)(3).

   b. We suggest that you supplement the response by explaining why the amine absorber system, amine regeneration unit, and sour water stripping system units are being removed from this section of the permit. The proposed response to this comment focuses on the bypass lines serving each emission unit (addressed under 40 CFR 63.1562(b)(4)) but does not discuss 40 CFR 63 Subpart UUU's applicability to each emissions unit specifically. If each emissions unit is being removed from this part of the permit because they are not part of the sulfur recovery unit as defined at 40 CFR 63.1579, then the response should say this directly to ensure a more complete response.

   c. We suggest identifying where the vent stream goes when each emissions unit vents to the bypass line as part of the response. This would more specifically address whether an affected vent stream is being diverted away from a control device used to comply with 40 CFR 63 Subpart UUU. 40 CFR 63.1562(b)(4) states that affected sources include bypass lines that "could" divert an affected vent stream from the control device used to comply with this subpart.

2.) (b)(6) Comment 3 describes the use of low-emission valves and other work practices that may be available for controlling fugitive VOC emissions.

   a. While the response explains that IDEM reviewed the RBLC to identify available control technologies, it is not clear whether low emission valves were evaluated as part of the BACT process for this permit. We suggest that you consider evaluating low emission valves and other work practices as part of the BACT analysis. If these valves and work practices are potentially available control options, then the analysis should consider whether these options are technically feasible and whether they are the most effective available controls. Alternatively, we suggest providing justification explaining why the technologies and work practices identified in the comment would not need to be evaluated in the BACT analysis.

   b. We suggest that you consider clarifying the response regarding the RBLC review. The statement in response to (b)(6) comment 3, "OAQ relies on the review of

BACT determinations that are in the RBLC for petroleum refineries", may imply that IDEM solely relied on RBLC determinations for this permit to determine BACT. However, the response to Earthjustice comment 4 explains that other sources of information, such as permits and other supporting documents for sources in other states, are considered as part of the BACT analysis. This part of the response to (b)(6) comment 3 may inadvertently contradict other responses included in the ATSD.

Suggestions for responses to Earthjustice Comments

3.) Earthjustice comment 1 raises several issues about the design of the proposed source.

a. In paragraph 5, specific issues identified in the "Sahu Report" are provided as a bulleted list in the comment and in the ATSD. It is not clear whether these examples are addressed in other responses included elsewhere in the response. We suggest that you respond to or otherwise acknowledge each example as part of the response and whether these examples would otherwise affect the decision on the permit application.

b. In paragraph 6, the commenter claims that the predicted emissions from the refinery "are in some cases barely below the applicable regulatory thresholds". We suggest acknowledging this part of the comment in the response. Footnote 40 of the commenter's letter identifies annual $PM_{2.5}$, 1-hour NO_2, and 1-hour SO_2 modeled impacts. If another part of the ATSD addresses these impacts, then a reference to that response as part of this response would be helpful.

c. Paragraph 6 of this comment also claims that "IDEM's emissions predictions are unreliable and susceptible to significant changes" because the design has yet to be determined. We suggest that you provide a response addressing how significant changes to the design versus how it is described in the application would affect the permit. Providing some explanation about IDEM's permit requirements when the design of a permitted facility changes would be helpful. Particularly, IDEM has required permitted sources to revise their permit if the source changes processes or emissions units during later design and construction.

d. Paragraph 7 of this comment claims that IDEM "used unsupported assumptions about the refinery's design specifications and technologies to support its conclusion that the refinery would not degrade Spencer County's air quality". Footnote 42 refers to the assumption that 100% of VOC emissions will be controlled. We suggest that you respond to this claim. If this is addressed in other responses to comments, then a reference to that response would be helpful.

4.) Earthjustice comment 2 raises several concerns about the emissions calculations for this permit.

a. Paragraphs 2 and 4 of this comment raise several issues with using AP-42 emission factors and fugitive leak VOC emission factors to estimate emissions at the source. We suggest that you supplement the response by addressing how these emission factors were used in this permit action. Stating that these emission factors were used to determine NSR and Title V applicability would clarify how these emission factors were used in this permit. Explaining that emission limitations were selected through the BACT process would further clarify the response.

b. Paragraph 3 of this comment questions the reliability of the AP-42 emission factors. We suggest addressing this claim in the response, especially for any pollutants that did not trigger NSR or other requirements. Explaining why these emission factors were appropriate for determining applicability would provide a more complete response.

c. Paragraph 5 of this comment raises issues with the flaring scenarios. We suggest that you either address this claim as part of this response or include references to other portions of the ATSD that would be responsive to this part of the comment. If not addressed elsewhere, explaining how the applicant defined each flaring scenario and how it was addressed in the PSD permit would help address this claim.

d. Paragraph 7 of this comment states that small changes to the PTE calculations would cause Spencer County to exceed the NAAQS. We suggest that you address this claim by explaining that the modeled emission rates included in the NAAQS analysis are the allowable emissions being established in this permit. Referring the air quality analysis would also be helpful as part of this response.

e. Paragraph 7 also raises issues related to HAP emissions. We suggest that you consider explaining how IDEM evaluated HAPs, either as part of this response or in other responses. We also suggest that you consider whether polycylic aromatic hydrocarbons (PAH) need to be addressed in the air toxics analysis. This would ensure a more complete response.

f. Bullet 2 of IDEM's response to Earthjustice Comment 2 includes "ref: note c". We understand that this refers to note c of AP-42, Chapter 8, Table 8.13-1. However, this may be confusing to the public because the reference to note C is separated from the citation to AP-42 Table 8.13-1. We suggest rewriting this sentence to make it clear that the reference is to note c of Table 8.13-1.

5.) Earthjustice comment 6 questions the BACT determination for fugitive VOC emissions. Paragraph 2 of this comment claims that optical gas imaging (OGI) and an enhanced LDAR program constitutes BACT. The response to this comment explains that OGI is an alternative work practice under the NSPS but does not explain why this would or would not be considered BACT. We suggest that you supplement the response by explaining whether OGI and an enhanced LDAR program would constitute BACT. Evaluating the technical feasibility and other factors through the BACT process would directly respond to this claim.

6.) Earthjustice comment 7 raises several issues about flare emissions.

a. Paragraph 1 of this comment states that IDEM may issue the permit if the source will not cause or contribute to a violation of the NAAQS or PSD increment. We suggest stating as part of the response that the air quality analysis does not show a violation of the NAAQS or the PSD increment.

b. Paragraph 4 questions whether startup, shutdown, and malfunction events at the source were considered in the permit. We suggest that you supplement the response by explaining how startup, shutdown, and malfunction flaring were considered in developing the permit.

c. Paragraph 4 also questions whether each flare's NOx and CO emissions were included in the modeling. We suggest that you supplement the response by explaining how each flare's NOx and CO emissions were modeled.

d. Paragraph 7 requests that IDEM revise its estimates of flaring scenarios "based on the refinery's design specifications if and when those specifications exist". We suggest that you supplement the response by explaining how design changes would affect the permit and under what circumstances the applicant would be required to revise the permit.

7.) Earthjustice comment 8 paragraph 6 states that IDEM has not provided sufficient information to the public because PM-10 modeling was made available after the beginning of the public comment period. We suggest that you revise the response to address this part of the comment.

<u>Suggestions for responses to Dr Ranajit Sahu's Comments</u>

8.) Dr Sahu comment 1 provides several examples. Like the suggestion for responding to Earthjustice comment 1, we suggest that you respond to the specific examples identified the comment.

9.) Dr Sahu comment 2 example (g) questions how tank VOC emissions originally marked as "TBD" were treated in the draft permit. We suggest that you supplement the response by explaining how these tank VOC emissions were considered in the permit.

10.) Dr Sahu comment 2 example (i) suggests that the assumptions for flaring events is not supported. We suggest that you supplement the response by explaining where the information supporting the flaring assumptions can be found.

11.) We suggest that you supplement the response to Dr Sahu's comment 3 by stating that the emission limitations included in the permit were modeled as part of the air quality analysis.

12.) Dr Sahu Comment 4 paragraph 4 questions whether a cost effectiveness analysis is required in the BACT analysis. We suggest that you respond to this part of the comment by

explaining when a cost analysis is required as part of BACT and whether such an analysis was necessary.

Suggestions for responses to Howard Gebhart's comments

13.) Mr Howard Gebhart Comment 7 questions the representativeness of the meteorological data used in the air quality analysis. Although the complete response is not available for review, we suggest that the response consider factors that would affect meteorological data representativeness, such as terrain, distance, data quality, surface characteristics at the tower, predominant wind directions, and other relevant factors.

14.) Gebhart Comment 9 questions whether NOx and CO emissions were modeled for the flare. The comment questions whether the modeling files were included in the SharePoint directory containing the modeling files. We suggest that you identify the NOx and CO modeling filenames in the response.

15.) We suggest that you supplement the response to Gebhart comment 11 by explaining whether flare emissions were included as part of the MERP analysis.

16.) Gebhart comment 14 paragraph 5 includes several comments and requests.

a. We suggest that you supplement the response to this comment by stating what the correct PM_{10} emission rate should be. This ensures that the request for verifying the modeled PM_{10} emission rate and making it publicly available is addressed.

b. We suggest that you respond to the part of the comment requesting a secondary PM_{10} formation analysis. Explaining why a secondary PM_{10} formation analysis is not required would ensure a more complete response to the comment.

17.) Gebhart comment 15 questions the selection of the ambient NO_2 monitor used in the air quality analysis. Although the response is not available for review, we suggest that the response consider factors affecting the representativeness of ambient monitors such as meteorology, monitor location, types of sources impacting the monitor, and other relevant factors.

18.) Gebhart comment 17 questions how HAP emission calculations will be verified. We suggest supplementing the response by explaining how these emissions will be calculated. Identifying relevant portions of 40 CFR 63 Subpart CC would help ensure a more complete response.

19.) In the response to Gebhart comment 19, IDEM cites 40 CFR 52.21(b)(18) for the definition of secondary emissions. While this is a correct citation to the definition, we suggest that you cite the relevant Indiana SIP-approved definition at 326 IAC 2-2-1(vv) as appropriate.

General Comments on the Response

20.) The Earthjustice comments include several footnotes as part of the response. We suggest reviewing the footnotes to determine if these footnotes include comments that require a response. The footnotes were not included when incorporating the comments into the ATSD, so it may be possible to miss some of the supporting information that the commenters submitted.

21.) We understand that the responses to general comments are still being composed. While this may be appropriate in a broad sense, we suggest that you review each individual comment to ensure that the general response sufficiently addresses any specific issues.